

## ABSTRACT OF THE DISCLOSURE

After execution of sub-block erase (S2) for partly erasing a memory cell block, sub-block erase verify read is executed (S4). As a result of the sub-block erase verify  
5 read, if the sub-block erase is completed, then terminate the sub-block erase (S5). If otherwise the sub-block erase is not completed yet, then perform over-program verify read (S6) to thereby determine whether the cause of an event that a sub-block erase-verify result becomes "Fail" due to the  
10 deficiency of erase or the presence of an over-programmed cell or cells. If the result of such over-program verify read is "Pass," then repeat execution of the sub-block erase verify read (S2). When the over-program verify read (S6) is "Fail," output a Fail result and then complete the operation  
15 (S8).